

AMENDED IN SENATE APRIL 9, 2012

**SENATE BILL**

**No. 1298**

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**Introduced by Senator Padilla**

February 23, 2012

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An act to add Division 16.6 (commencing with Section 38750) to the Vehicle Code, relating to vehicles.

LEGISLATIVE COUNSEL'S DIGEST

SB 1298, as amended, Padilla. Vehicles: autonomous vehicles: safety *and performance* requirements.

Existing law requires the Department of the California Highway Patrol to adopt rules and regulations that are designed to promote the safe operation of specific vehicles, including, among other things, schoolbuses and commercial motor vehicles.

*This bill would authorize the operation of an autonomous vehicle, as defined, on public roads by a licensed driver if either of 2 conditions applies, including, among other things, that the manufacturer of the autonomous technology certifies that the autonomous vehicle has a mechanism to engage and disengage the autonomous technology that is easily accessible to the operator and that the autonomous technology meets all applicable safety standards and performance requirements set forth in state and federal law and the regulations promulgated pursuant to those provisions.*

*The bill would require that federal regulations promulgated by the National Highway Traffic Safety Administration (NHTSA) would supersede these provisions when found to be in conflict. The bill would authorize the Department of the California Highway Patrol, in consultation with the Department of Motor Vehicles, to recommend to*

*the Legislature additional requirements for the safe operation of autonomous vehicles on California's public roads.*

~~This bill would require the department to adopt safety standards and performance requirements to ensure the safe operation and testing of "autonomous vehicles," as defined, on the public roads in this state. The bill would permit autonomous vehicles to be operated or tested on the public roads in this state pending the adoption of safety standards and performance requirements that would be adopted under this bill.~~

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: no.

*The people of the State of California do enact as follows:*

1 SECTION 1. Division 16.6 (commencing with Section 38750)  
2 is added to the Vehicle Code, to read:

3  
4 DIVISION 16.6. AUTONOMOUS VEHICLES  
5

6 38750. The Legislature finds and declares all of the following:

7 (a) Development is actively under way of new technology that,  
8 through the use of computers, sensors, and other systems, permits  
9 a motor vehicle to operate without the active control and continuous  
10 monitoring of a human operator. Motor vehicles with this  
11 technology, referred to as "autonomous vehicles," offer significant  
12 potential safety, mobility, and commercial benefits for individuals  
13 and businesses in the state and elsewhere.

14 (b) Autonomous vehicles have been operated safely on public  
15 roads in the state in recent years by companies developing and  
16 testing this technology.

17 (c) The State of California, which presently does not prohibit  
18 or specifically regulate the operation of autonomous vehicles,  
19 desires to encourage the current and future development, testing,  
20 and operation of autonomous vehicles on the public roads of the  
21 state. The state seeks to avoid interrupting these activities while  
22 at the same time creating appropriate rules intended to ensure that  
23 the testing and operation of autonomous vehicles in the state are  
24 conducted in a safe manner.

25 (d) Toward that end, the Legislature finds it appropriate to  
26 authorize the establishment of specific safety requirements for the  
27 testing and operation of autonomous vehicles, and to require that

1 future testing and operation of autonomous vehicles in the state  
2 comply with those requirements.

3 38751. (a) For purposes of this division, the following  
4 definitions apply:

5 (1) “Autonomous technology” means technology that has the  
6 capability to drive the vehicle on which it is installed without the  
7 active control or continuous monitoring by a human operator.

8 (2) (A) “Autonomous vehicle” means any vehicle equipped  
9 with autonomous technology.

10 (B) An autonomous vehicle does not include a vehicle that is  
11 equipped with one or more collision avoidance systems, including,  
12 but not limited to, electronic blind spot assistance, automated  
13 emergency braking systems, park assist, adaptive cruise control,  
14 lane keep assist, lane departure warning, traffic jam and queuing  
15 assist, or other similar systems that enhance safety or provide  
16 driver assistance, but are not capable, collectively or singularly,  
17 of driving the vehicle without the active control or monitoring of  
18 a human operator.

19 (3) A “manufacturer” of autonomous technology is the person  
20 as defined in Section 470 that originally manufactures a vehicle  
21 and equips autonomous technology on the originally completed  
22 vehicle or, in the case of a vehicle not originally equipped with  
23 autonomous technology by the vehicle manufacturer, the person  
24 that modifies the vehicle by installing autonomous technology to  
25 convert it to an autonomous vehicle after the vehicle was originally  
26 manufactured.

27 (b) An autonomous vehicle may be operated on public roads by  
28 a licensed driver if either of the following applies:

29 (1) The autonomous vehicle is being operated on roads in this  
30 state solely by employees, contractors, or other persons designated  
31 by the manufacturer of the autonomous technology for testing  
32 purposes. For testing purposes, a human operator shall be present  
33 in the autonomous vehicle such that he or she has the ability to  
34 monitor the vehicle’s performance and intervene, if necessary,  
35 unless the vehicle is being tested or demonstrated on a closed  
36 course. Prior to the start of testing in this state, the entity  
37 performing the testing must obtain an instrument of insurance,  
38 surety bond, or proof of self-insurance in the amount of five million  
39 dollars (\$5,000,000). An autonomous vehicle may be tested on the  
40 public roads of the state with the autonomous technology engaged

1 *only if the entity performing the tests has completed at least 10,000*  
2 *miles of prior road testing with the autonomous technology*  
3 *engaged on a vehicle.*

4 *(2) The manufacturer of the autonomous technology certifies*  
5 *all of the following:*

6 *(A) The autonomous vehicle has a mechanism to engage and*  
7 *disengage the autonomous technology that is easily accessible to*  
8 *the operator.*

9 *(B) The autonomous vehicle has a visual indicator inside the*  
10 *cabin to indicate when the autonomous technology is engaged.*

11 *(C) The autonomous vehicle has a system to safely alert the*  
12 *operator if an autonomous technology failure is detected while*  
13 *the autonomous technology is engaged, and when an alert is given,*  
14 *the system shall do either of the following:*

15 *(i) Require the operator to take control of the autonomous*  
16 *vehicle.*

17 *(ii) If the operator is unable to take control of the autonomous*  
18 *vehicle, or the operator is not physically present inside the vehicle,*  
19 *be equipped with technology capable of moving the autonomous*  
20 *vehicle safely out of traffic and to a complete stop.*

21 *(D) If limitations of the autonomous technology installed on the*  
22 *autonomous vehicle make it necessary for the operator to be*  
23 *physically present inside the autonomous vehicle when the*  
24 *autonomous technology is engaged, the autonomous vehicle shall*  
25 *allow the operator to take control in multiple manners, including,*  
26 *without limitation, through the use of the brake, the accelerator*  
27 *pedal, or the steering wheel, and it shall alert the operator that*  
28 *the autonomous technology has been disengaged.*

29 *(E) The autonomous technology meets all applicable safety*  
30 *standards and performance requirements set forth in state and*  
31 *federal law and the regulations promulgated pursuant to those*  
32 *laws.*

33 *(F) The autonomous technology does not adversely affect any*  
34 *safety features of the autonomous vehicle that are mandated by*  
35 *federal regulations.*

36 *(c) For purposes of this section, a person is the operator of an*  
37 *autonomous vehicle when the person causes the autonomous*  
38 *technology to engage, regardless of whether the person is*  
39 *physically present in the vehicle while it is engaged.*

1     (d) *Federal regulations promulgated by the National Highway*  
2     *Traffic Safety Administration shall supersede this section when*  
3     *found to be in conflict with this section.*

4     (e) *The Department of the California Highway Patrol may, in*  
5     *consultation with the Department of Motor Vehicles, recommend*  
6     *to the Legislature additional requirements for the safe operation*  
7     *of autonomous vehicles on California's public roads.*

8     38751. ~~(a) Except as provided in subdivision (b), autonomous~~  
9     ~~vehicles may be operated on the public roads in this state if the~~  
10    ~~manufacturer of the autonomous vehicle certifies, in a manner to~~  
11    ~~be determined by the Department of the California Highway Patrol,~~  
12    ~~that the vehicle meets all of the safety standards and performance~~  
13    ~~requirements adopted by the department pursuant to subdivision~~  
14    ~~(e) to ensure the safe operation of the vehicle.~~

15    ~~(b) A manufacturer of an autonomous vehicle may operate the~~  
16    ~~vehicle for testing purposes on the public roads in this state if the~~  
17    ~~manufacturer and the vehicle to be tested meet the testing safety~~  
18    ~~requirements adopted by the department.~~

19    ~~(c) (1) "Autonomous vehicle" means a motor vehicle that uses~~  
20    ~~computers, sensors, and other technology and devices that enable~~  
21    ~~the vehicle to safely operate without the active control and~~  
22    ~~continuous monitoring of a human operator.~~

23    ~~(2) A vehicle equipped with one or more crash avoidance~~  
24    ~~systems, including, but not limited to, electronic blind spot~~  
25    ~~assistance, automated emergency braking systems, park assist,~~  
26    ~~adaptive cruise control, lane keep assist, lane departure warning,~~  
27    ~~traffic jam and queuing assist, or other similar systems that enhance~~  
28    ~~safety or provide driver assistance, but are not capable, collectively~~  
29    ~~or singularly, of driving the vehicle without the active control and~~  
30    ~~continuous monitoring of a human operator, is not an autonomous~~  
31    ~~vehicle.~~

32    ~~(d) A "manufacturer" of an autonomous vehicle is the person~~  
33    ~~as defined in Section 470 that manufactures the autonomous vehicle~~  
34    ~~as an originally completed vehicle or, in the case of a vehicle not~~  
35    ~~originally equipped with autonomous technology, the person that~~  
36    ~~modifies the vehicle to convert it to an autonomous vehicle.~~

37    ~~(e) (1) As used in this division, "department" means the~~  
38    ~~Department of the California Highway Patrol. The department~~  
39    ~~shall adopt regulations to implement the provisions of this division~~

- 1 ~~pursuant to Chapter 3.5 (commencing with Section 11340) of~~
- 2 ~~Division 3 of Title 2 of the Government Code.~~
- 3 ~~(2) This division does not prohibit the operation and testing of~~
- 4 ~~autonomous vehicles on the public roads in this state on or before~~
- 5 ~~the adoption of regulations by the department.~~